

# Claims

- [c1] 1.A respiratory measurement system, comprising:  
a strapping device that is configured to be placed across  
a chest of a person, the strapping device being substan-  
tially transparent to x-rays; and,  
a sensor operatively coupled to the strapping device  
generating a measurement signal indicative of a dis-  
placement of the strapping device during respiration by  
the person.
- [c2] 2.The respiratory measurement system of claim 1 further  
comprising a device generating a visual indication of  
respiratory function of the person based on the signal.
- [c3] 3.The respiratory measurement system of claim 2  
wherein respiratory function comprises a lung volume  
level.
- [c4] 4.The respiratory measurement system of claim 1  
wherein the strapping device comprises a polypropylene  
string.
- [c5] 5. The respiratory measurement system of claim 1 fur-  
ther comprising a plastic tube configured to be placed  
across the chest of the person, the strapping device be-

ing disposed in the plastic tube.

- [c6] 6.The respiratory measurement system of claim 1 wherein the sensor comprises a linear position encoder.
- [c7] 7.The respiratory measurement system of claim 1 further comprising:  
a tabletop having a securing device and a pulley coupled thereto, wherein a first portion of the strapping device extends between the securing device and the pulley, the securing device and the pulley being positioned on the tabletop to allow the chest of the person to be disposed between the securing device and the pulley.
- [c8] 8.The respiratory measurement system of claim 7 wherein a second portion of the strapping device extends from the pulley to the sensor.
- [c9] 9.A method for measuring respiratory motion of a person, comprising:  
disposing a strapping device across a chest of the person, the strapping device being substantially transparent to x-rays; and,  
generating a measurement signal indicative of a displacement of the strapping device during respiration by the person.
- [c10] 10.The method of claim 9 further comprising disposing a

plastic tube across the chest of the person, the strapping device being disposed in the plastic tube.

- [c11] 11.The method of claim 9 wherein the strapping device comprises a polypropylene string.
- [c12] 12.The method of claim 9 further comprising providing a visual indication of respiratory function of the person based on the signal.
- [c13] 13.The method of claim 10 wherein respiratory function comprises a lung volume level.
- [c14] 14.A medical diagnostic system, comprising:
  - a tabletop;
  - an X-ray device disposed proximate the tabletop;
  - a strapping device that is configured to be placed across a chest of a person lying on the tabletop, the strapping device being substantially transparent to x-rays; and,
  - a sensor operatively coupled to the strapping device generating a measurement signal indicative of a displacement of the strapping device during respiration by the person, the sensor being outside a scanning area of the X-ray device.
- [c15] 15.The medical diagnostic system of claim 14 further comprising a device generating a visual indication of respiratory function of the person based on the signal.

- [c16] 16. The medical diagnostic system of claim 15 wherein respiratory function comprises a lung volume level.
- [c17] 17. The medical diagnostic system of claim 14 wherein the strapping device comprises a polypropylene string.
- [c18] 18. The medical diagnostic system of claim 14 further comprising a plastic tube configured to be placed across the chest of the person, the strapping device being disposed in the plastic tube.
- [c19] 19. The medical diagnostic system of claim 14 wherein the device comprises a linear position encoder.
- [c20] 20. The medical diagnostic system of claim 14 further comprising a securing device and a pulley coupled to the tabletop, a first portion of the strapping device extending between the securing device and the pulley, the securing device and the pulley being positioned on the tabletop to allow a chest of the person to be disposed between the securing device and the pulley.